

International Application No

PCT/IB 03/00495

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 H05B41/38 H05B41/288

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 H05B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 415 496 A (PHILIPS PATENTVERWALTUNG ;PHILIPS NV (NL)) 6 March 1991 (1991-03-06) column 4, line 26 -column 10, line 2; figures 1,2,4	1-4,6
X	DE 100 64 039 A (MITSUBISHI ELECTRIC CORP) 20 December 2001 (2001-12-20) column 1, line 45 -column 1, line 64 column 7, line 20 -column 8, line 25; figures 1,2	1-4,6
X	EP 1 043 919 A (HELLA KG HUECK & CO) 11 October 2000 (2000-10-11) column 1, line 20 -column 2, line 49 column 3, line 37 -column 4, line 26; figure 1	1-4,6
	--- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

15 April 2003

Date of mailing of the international search report

25/04/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Speiser, P

Internatio Application No  
PCT/IB 03/00495

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 514 935 A (ODA GOICHI ET AL) 7 May 1996 (1996-05-07) column 1, line 42 -column 2, line 37 column 5, line 36 -column 6, line 46; figures 1-10B ---	1,5
A	US 6 172 469 B1 (KERN ROBERT) 9 January 2001 (2001-01-09) column 2, line 4 -column 2, line 24; figures 1,2 ---	1,5
A	EP 0 647 085 A (MARELLI AUTRONICA) 5 April 1995 (1995-04-05) column 1, line 52 -column 2, line 50 column 3, line 39 -column 4, line 27; figure 1 -----	1

# INTERNATIONAL SEARCH REPORT

Internatij Application No  
PCT/IB 03/00495

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0415496	A	06-03-1991	DE 3928810 A1 EP 0415496 A2 HU 54849 A2 JP 3098295 A	07-03-1991 06-03-1991 28-03-1991 23-04-1991
DE 10064039	A	20-12-2001	DE 10064039 A1 JP 2002050497 A	20-12-2001 15-02-2002
EP 1043919	A	11-10-2000	DE 19915795 A1 EP 1043919 A2	19-10-2000 11-10-2000
US 5514935	A	07-05-1996	JP 2879514 B2 JP 6260291 A DE 4400093 A1	05-04-1999 16-09-1994 14-07-1994
US 6172469	B1	09-01-2001	DE 4439885 A1 WO 9614724 A1 DE 59503289 D1 EP 0791282 A1 ES 2121415 T3 JP 10508421 T	09-05-1996 17-05-1996 24-09-1998 27-08-1997 16-11-1998 18-08-1998
EP 0647085	A	05-04-1995	IT 1261596 B DE 69414340 D1 DE 69414340 T2 EP 0647085 A1 ES 2124347 T3 JP 7169582 A US 6140770 A	23-05-1996 10-12-1998 12-05-1999 05-04-1995 01-02-1999 04-07-1995 31-10-2000

Best Available Copy